

structure of human populations which obviously is of crucial importance in all population genetics. One of the first investigations has been made by G. W. Lasker, who, in his paper, calculates the population size, admixture rates and effective breeding population in a number of Middle American communities. Such information is very necessary in determining, among other things, whether genetic drift has played any role in human differentiation. The analysis by B. Glass, M. S. Sacks, E. F. Jahn and C. Hess, of the gene frequencies in a small American religious isolate of German origin, is one of the few serious attempts to answer this question. They found that, at least, the ABO and MN blood group frequencies in the isolate differed both from the American and German values. The most likely explanation is that the genes have drifted but, of course, it does not necessarily follow that drift is ever of consequence in long-term evolution. It further needs to be remembered that if, as seems likely, infectious disease is ultimately responsible for the blood group polymorphisms, recent advances in medicine may well have removed the selective forces and temporarily allowed the genes to drift in small populations.

B. Glass and C. C. Li have recently devised an expression for calculating the rates as well as the extent of racial admixture. Though the paper in which this is presented is not included in this book, the method has been used in a contribution of D. F. Roberts in which he calculates more reliable estimates than those of Glass and Li of the rate of gene flow into the American Negro by using gene frequencies which are more likely to represent those of the original slave population. He provisionally concludes that the modal rate of gene flow from white to Negro is between 0.02 and 0.025 per generation and that the accumulated amount of white admixture is 20 per cent. These estimates are not likely to be affected by miscegenation of Negroes with Amerindians since in another paper Glass shows that the Indian contribution to the hybrid population has been very small.

Few experimental studies of racial differences have yet been made, but this would seem to be a most profitable approach, particularly with reference to responses to climatic factors. This

is the subject of the two concluding papers. G. M. Brown and J. Page show that the hand blood flow is greater at low temperatures in Eskimos than in "Europeans" and T. Adams and B. G. Covino find that Eskimos have higher metabolic rates and elevated shell and core temperatures than "Europeans" and that Negroes, because they do not elevate their metabolic rates until late in a cold exposure are probably particularly susceptible to cold injury.

This book contains some excellent papers and its scope is obviously comprehensive, but the coverage is uneven and it is not readily apparent for whom the book is intended. Readers will probably find either that they already know at least half of its contents or that they have great difficulty in understanding the other half, for a number of the papers are complicated and technical. It seems also worthwhile mentioning that all the papers come from journals which are readily available in most libraries and those to whom they are of professional interest will already have been long conversant with them. Perhaps it is unfair to criticize too strongly the editor's selection, since it will never happen that two people place the same valuation on a piece of work, but there are some glaring omissions and contrariwise one cannot help feeling that some of the papers were chosen at least partly for their brevity. Further, although the editor has attempted to remedy the defect by providing short introductions to each of the topics there is little sense of unity in the book. This is almost invariably a disadvantage of symposia but is particularly obvious when the contributions were not written with the intention of being published together. Despite these criticisms *Readings on Race* is a worthwhile book; it truly reflects the current attitudes and approach of anthropologists to this important subject and may well facilitate a wider understanding of it.

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POPULATION

Cox, Peter R. *Demography*. Third edition. London, 1959. Cambridge University Press. Pp. xiv + 346. Price 25s.

THE FIRST EDITION of this important book appeared in 1950. It was then described as "written mainly to provide a connected account

of the principles and methods employed in the study of population for actuarial students and for all who are concerned with population statistics." The second edition came out in 1957; it incorporated an addendum to the first edition issued in 1955, but was otherwise unchanged. The book has now been recast to give the third edition. The original aims remain, but the recasting has increased its value for all "concerned with population statistics." It is much less "exclusively related to the population of Great Britain"; a new chapter has been added which deals with world population and the demography of certain countries overseas. After an introduction which discusses the scope and sketches the early history of demography, there follow three chapters on the sources of information about population. Next the statistical treatment of mortality, marriage and fertility data is described. Then comes a discussion of population estimates, the chapter on world population mentioned above, an account of the population situation in Great Britain and the measurement of disability. The last chapter contains suggestions for further study and research. There is an appendix containing an introduction to population mathematics.

That a third edition should be called for is a tribute to the clarity and economy of the exposition and the professional competence which characterize the book. It also provides welcome evidence of the growth of interest in population statistics; as already indicated the book is becoming directed more to the interests of demographic statisticians which are wider than those of actuarial students.

A. M. CARR-SAUNDERS

Ho, Ping-ti. *Studies on the Population of China, 1368-1953.* Harvard East Asian Studies 4. Cambridge, Mass., 1959. Harvard University Press. (London, 1960, Oxford University Press.) Pp. xviii + 341 + xxxii. Price 48s.

"IT IS IMPOSSIBLE for any modern student to suggest definite numbers in his attempt at historical reconstruction. The best he can do is to suggest ranges and limits . . . by correlating all major economic and institutional factors which had important bearing on population movements . . . Broad demographic theories

must, therefore, be resisted until all available facts and factors peculiar to each period have been examined." In these evidently reasonable words the author explains his purpose in writing this work of scholarly research. The available records are by no means scanty; indeed by the standards of most countries data for the fourteenth to eighteenth centuries are quite plentiful. But they are not complete or consistent and require very careful interpretation. It is therefore necessary to study not only the counts of heads for taxation purposes but also the land surveys, the records of food production, the evidence of migrations and the accounts of losses due to rebellions, wars, floods and droughts—all in order to obtain suitable cross-checks on information which, for economic and fiscal reasons, is subject to a varying degree of bias from place to place and from time to time.

The author's survey suggests that in the late fourteenth century there might have been some 65,000,000 Chinese and that these numbers had probably doubled by the beginning of the sixteenth century. A period of demographic stability followed, but the years from 1683 to 1851 were very favourable to population growth, and during this time there may have been a further increase from 150,000,000 to 430,000,000 persons. The century that ensued—ending only in 1950—was, however, a time of horror in which hideous truth seems to have surpassed the most gruesome fiction even of to-day. The chapter entitled "Catastrophic Deterrents" is a record of violence and misery that can hardly have been surpassed in intensity, and certainly not in size, in human history. Although China has long been recognized as a country where Malthusian checks have operated, the dismal record of flood, famine and slaughter is still an affecting tale, and it throws an interesting light on the problems of the present time. After such an unhappy period, a strong central government with an economic policy promising greater prosperity, could hardly fail to win the support of many of the people, however compelling its methods.

In connection with the checks to population growth, three points of special interest emerge from the book. First, the author describes these checks as including not only those of Malthus